



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
|-----------------|-------------|----------------------|---------------------|------------------|

10/661,537

09/15/2003

Raita Doi

040894-5955

8035

9629 7590 06/30/2008
MORGAN LEWIS & BOCKIUS LLP
1111 PENNSYLVANIA AVENUE NW
WASHINGTON, DC 20004

EXAMINER

TAWFIK, SAMEH

ART UNIT

PAPER NUMBER

3721

MAIL DATE

DELIVERY MODE

06/30/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/661,537 | DOI, RAITA | |
| | Examiner | Art Unit | |
| | Sameh H. Tawfik | 3721 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 April 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-33,36 and 37 is/are pending in the application.
- 4a) Of the above claim(s) 12-15,17 and 22-30 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11,16,18-21,31-33,36 and 37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-11, 16, 18-21, 31-33, 36, and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Viens (U.S. Patent No. 5,554,094).

Viens discloses a sheet folding apparatus comprising a sheet folding unit which applies at least letter folding on a sheet (Figs. 1, 2-4, 5A, 5B, and 6A); an auto folding mode selecting device (via folding station 12 and a computer processing unit including two keyboard/monitor units 14A and 14B; column 4, lines 24-27) which selectively causes the sheet folding unit to operate in one of a plurality of folding modes including at least letter C-folding, letter Z-folding, and Z-folding (Figs. 1-4; column 4, lines 40-44 and 61-64 and column 2, lines 21-23; via the different types folds accomplished by folding apparatus 12); a control device that moves and sets components arranged along the single sheet path so that the sheet is transported through the single sheet path in accordance with the folding mode, see for example (Fig. 1; via controlling means 14A and 14B to control the whole device including the sheet path in accordance with the folding mode 12).

Viens does not disclose that a folding mode selecting device causes the folding position changing mechanism to change a sheet folding position in accordance with a selected one of the folding mode. However, Viens discloses different folding mode as clearly shown in (Figs. 5A-

Art Unit: 3721

8B; via folding station 12), but does not show the claimed “folding mode selecting device” as Viense select the mode manually (via the user).

However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified Viens’s sheet folding machine by using a folding mode selecting device to replace the manual work of changing the folding mode, since it has been held that broadly providing a mechanical or automatic means to replace manual activity which has accomplished the same result involves only routine skill in the art. In re Venner, 120 USPQ 192.

Regarding claim 2: further comprising a control device which controls the sheet folding unit in accordance with a folding mode selected by the folding mode selecting device (column 4, lines 24, 25, and 31-36) via the computer processing unit monitor each document 18 as it proceeds through the system and as shown in Figs. 2-4 document 18 in C fold, Z fold, or half fold done by the folding apparatus 12 as shown in Fig. 5A.

Regarding claim 4: wherein the sheet folding unit (12) comprises a plurality of folding mechanisms in a sheet path (Figs. 5A and 5B).

Regarding claim 5: wherein at least one of the folding mechanisms comprises a folding position changing mechanism which can change a sheet folding position (Figs. 5A; via adjustable stoop 74 and 86).

Regarding claim 6: wherein among the folding mechanisms an upstream folding mechanism comprises a skew correcting mechanism which applies skew correction on the sheet (Figs. 5A and 5e) via when the sheets stop by the adjustable stop 86 will cause the sheet to curve and fold as shown in Fig. 5e.

Regarding claim 7: wherein at least one of the folding mechanisms comprises a folding member which is disposed in a sheet path to nip-transport the sheet (Fig. 5A; via 80 and 90); a transport member (Fig. 5A; via in-feed device 42, 60, 62 and nip 76) which is disposed in the sheet path upstream from the folding member (80 and 90) to nip-transport the sheet; and a tip end guide member (via adjustable stop 86) which is disposed in the sheet path upstream from the folding member (80 and 90) to restrict a position of a tip end of the sheet.

Regarding claim 8: wherein the folding mechanism comprises a folding position changing mechanism which moves the tip end guide member (86) that is movable, to enable a sheet folding position to be changed (Fig. 5B).

Regarding claim 9: wherein in the folding mechanism (80 and 90) a skew correcting mechanism which applies skew correction on the sheet configured by the transport member which can perform nipping (via 76) and releasing operations, and the tip end guide member (86), see for example (Figs. 5A and 5e).

Regarding claim 10: wherein after tip end of the sheet butts against the tip end guide member (86), the skew correcting mechanism causes the transport member (76) to transport the sheet by a short distance to form a loop on a side of the tip end of the sheet (Fig. 5e) and thereafter causes the transport member to perform the releasing operation (Figs. 5A and 5e; via to allow the sheets to go through the folding mechanism 80 and 90).

Regarding claim 11: Viens discloses a feeding mechanism nips the sheet that has subjected to skew correction by the skew correcting mechanism, by the transport member (via nip 76) and feeds the sheet that has been subjected to skew correction to the folding member

Art Unit: 3721

(Figs. 5A and 5e; via 80 and 90). Viens does not disclose that setting a transportation speed of the transport member to a speed, which is equal to or lower than a speed of the folding member.

However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified Viens's folding apparatus by setting a transportation speed of the transport member to a speed which is equal to or lower than a speed of the folding member, as a matter of engineering design choice, since the examiner takes an official notice that having two different speed in same apparatus such as the feeding speed different than the folding speed is old, well known, and available in the art, in order to improve and avoid any jam in the folding apparatus.

Regarding claim 18: further comprising a sheet folding postprocessing apparatus (Fig. 5A; via 12) which applies a predetermined postprocess on a sheet that has been subjected to a folding process by the sheet folding apparatus, see for example (Figs. 1 and 5A).

Regarding claim 19: further comprising a control device which controls at least the sheet folding apparatus and the sheet folding postprocessing apparatus in accordance with a postprocessing mode applied on the sheet (column 4, lines 24, 25, and 31-36) via the computer processing unit monitor each document 18 as it proceeds through the system and as shown in Figs. 2-4 document 18 in C fold, Z fold, or half fold done by the folding apparatus 12 as shown in Fig. 5A.

Regarding claim 20: wherein the control device houses a letter-folded sheet into a sheet accommodating device in the sheet folding apparatus, under conditions of performing a letter folding process on the sheet by the sheet folding apparatus (Figs. 2-4, 5A, and 5B).

Regarding claim 21: wherein the control device guides a folded sheet to the sheet folding postprocessing apparatus, under conditions of performing Z-folding (Fig. 2) other than letter folding on the sheet by the sheet folding apparatus (Fig. 5A).

Regarding claim 31: wherein the plurality of modes of folding include letter C-folding, letter Z-folding and size A3 Z-folding (Figs. 5B, 6B, and 7B).

Regarding claim 32: wherein the sheet folding unit includes a plurality of folding mechanisms in the sheet path, at least one of the folding mechanisms includes a folding member (Fig. 5A; via roller 80 and 90) which is disposed in the sheet path to nip-transport the sheet; a transport member (Fig. 5; via rollers 78 and 80) which is disposed in the sheet path upstream from the folding member to nip-transport the sheet; and a tip end guide member (Fig. 5; via adjustable 86) which is disposed in the sheet path upstream from the folding member (80 and 90) to restrict a position of a tip end of the sheet, a plurality of modes of folding can be applied on the sheet by moving the tip end guide member that is movable (Figs. 5A, 6A, and 7A)

Regarding claim 33: Viens discloses the sheet folding unit which applies folding on a sheet as the sheet proceeds along a single sheet path (column 4, lines 61-64; via 12); includes a plurality of folding mechanisms in the sheet path, at least one of the folding mechanisms includes a folding member (Fig. 5A; via roller 80 and 90) which is disposed in the sheet path to nip-transport the sheet; a transport member (Fig. 5; via rollers 78 and 80) which is disposed in the sheet path upstream from the folding member to nip-transport the sheet; and a tip end guide member (Fig. 5; via adjustable 86) which is disposed in the sheet path upstream from the folding member (80 and 90) to restrict a position of a tip end of the sheet, a folding modes can be applied on the sheet by moving the tip end guide member that is movable (Figs. 5A, 6A, and 7A);

Art Unit: 3721

wherein one of a plurality of folding modes can be applied on the sheet as the sheet proceeds along a single path (Figs. 5A, 6A, 7A, 8A, and 9A).

Regarding claims 36 and 37: Viens discloses different sheet paths for different fold type. Viens does not disclose a mode switch to change the sheet path.

However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified Viens's sheet folding machine by using a folding mode selecting device with the use of mode switch to replace the manual work of changing the folding mode, since it has been held that broadly providing a mechanical or automatic means to replace manual activity which has accomplished the same result involves only routine skill in the art. In re Venner, 120 USPQ 192.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sameh H. Tawfik whose telephone number is 571-272-4470. The examiner can normally be reached on Tuesday - Friday from 9:00 AM to 7:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rinaldi Rada can be reached on 571-272-4467. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3721

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Sameh H. Tawfik/
Primary Examiner, Art Unit 3721

ST